



SEQUENCE LISTING

<110> CHOO, YEN
ISALAN, MARK

<120> NUCLEIC ACID BINDING PROTEINS

<130> 019496-006700US

<140> 09/646,353

<141> 2000-09-17

<150> GB 9805576.7

<151> 1998-03-17

<150> GB 9806895.0

<151> 1998-03-31

<150> GB 9807246.5

<151> 1998-04-03

<160> 81

<170> PatentIn Ver. 2.1

<210> 1

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<400> 1

Pro Tyr Lys Cys Pro Glu Cys Gly Lys Ser Phe Ser Gln Lys Ser Asp
1 5 10 15

Leu Val Lys His Gln Arg Thr His Thr Gly
20 25

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<400> 2

Pro Tyr Lys Cys Ser Glu Cys Gly Lys Ala Phe Ser Gln Lys Ser Asn
1 5 10 15

Leu Thr Arg His Gln Arg Ile His Thr Gly Glu Lys Pro
20 25

<210> 3

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 3
Thr Gly Glu Lys Pro
1 5

<210> 4
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
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oligonucleotide

<220>
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<222> (5)
<223> 5-methyl cytosine, Thymine or Cytosine

<400> 4
gcggnggcg

<210> 5
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zinc Finger
peptide

<400> 5
Arg Glu Asp Val Leu Ile Arg His Gly Lys
1 5 10

<210> 6
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 6
Arg Ala Asp Ala Leu Met Val His Lys Arg
1 5 10

<210> 7
<211> 10
<212> PRT
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<220>
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<400> 7
Arg Gly Pro Asp Leu Ala Arg His Gly Arg

9

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<210> 8
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<220>
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<400> 8
 Arg Ala Asp Ala Leu Met Val His Lys Arg
 1 5 10

<210> 9
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<400> 9
 Arg Gly Pro Asp Leu Ala Arg His Gly Arg
 1 5 10

<210> 10
 <211> 10
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<220>
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<400> 10
 Arg Glu Asp Val Leu Ile Arg His Gly Lys
 1 5 10

<210> 11
 <211> 60
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 11
 ctctctgcagt tggacctgtg ccatggccgg ctgggccgca tagaatggaa caactaaagc 60

<210> 12
 <211> 39
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<221> modified_base

<222> (8)..(11)

<223> GGMC or GMGC, where M is 5-Methyl Cytosine

<400> 12

tatagtgnnn nggcgtgtca cagtcagtcc acacacgtc

39

<210> 13

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 13

ggcccggcg

9

<210> 14

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 14

gcgccggcg

9

<210> 15

<211> 39

<212> DNA

<213> Artificial Sequence

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oligonucleotide

<220>

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<222> (10)

<223> 5-Methyl Cytosine

<400> 15

tatagtgggn cggcgtgtca cagtcagtcc acacacgtc

39

<210> 16

<211> 39

<212> DNA

<213> Artificial Sequence

<220>
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 oligonucleotide

<220>
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 <223> 5-Methyl Cytosine

<400> 16
 tatagtggng cggcgtgtca cagtcagtcc acacacgtc 39

<210> 17
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 <212> DNA
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<220>
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 oligonucleotide

<220>
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 <222> (10)
 <223> 5-Methyl Cytosine, Thymine or Cytosine

<400> 17
 tatagtgggn cggcgtgtca cagtcagtcc acacacgtc 39

<210> 18
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<220>
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 <223> 5- Methyl Cytosine, Thymine or Cytosine

<400> 18
 tatagtggng cggcgtgtca cagtcagtcc acacacgtc 39

<210> 19
 <211> 39
 <212> DNA
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<220>
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 oligonucleotide

<400> 19
 tatagtgggt cggcgtgtca cagtcagtcc acacacgtc 39

<210> 20
<211> 7
<212> PRT
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<220>
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peptide

<400> 20
Arg Ser Asp Glu Leu Thr Arg
1 5

<210> 21
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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peptide

<400> 21
Arg Ser Asp Glu Leu Thr Arg
1 5

<210> 22
<211> 7
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<220>
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peptide

<400> 22
Arg Ser Asp Glu Leu Thr Arg
1 5

<210> 23
<211> 7
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<220>
<223> Description of Artificial Sequence: Zinc finger
peptide

<400> 23
Arg Ser Asp Glu Leu Thr Arg
1 5

<210> 24
<211> 7

<212> PRT
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 <223> Description of Artificial Sequence: Zinc finger
 peptide

 <400> 24
 Arg Ser Asp Glu Leu Thr Arg
 1 5

 <210> 25
 <211> 7
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Zinc finger
 peptide

 <400> 25
 Arg Ser Asp Asp Leu Ser Gln
 1 5

 <210> 26
 <211> 7
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Zinc finger
 peptide

 <400> 26
 Arg Ser Asp Asp Leu Thr Arg
 1 5

 <210> 27
 <211> 7
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Zinc finger
 peptide

 <400> 27
 Arg Ser Asp Asp Leu Thr Gly
 1 5

 <210> 28
 <211> 7
 <212> PRT
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 <220>
 <223> Description of Artificial Sequence: Zinc finger

peptide

<400> 28

Arg Ser Asp His Leu Ser Ala
1 5

<210> 29

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc finger
peptide

<400> 29

Arg Ser Asp Asp Leu Ser Thr
1 5

<210> 30

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc finger
peptide

<400> 30

Arg Lys His His Arg Lys Glu
1 5

<210> 31

<211> 7

<212> PRT

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<220>

<223> Description of Artificial Sequence: Zinc finger
peptide

<400> 31

Tyr Asp Gly Ala Arg Lys Arg
1 5

<210> 32

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc finger
peptide

<400> 32

His Asn Arg Asp Arg Lys Arg

1

5

<210> 33

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc finger
peptide

<400> 33

Thr Asn Ser Thr Arg Thr Lys

1

5

<210> 34

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc finger
peptide

<400> 34

Arg Asn Asp His Arg Lys Thr

1

5

<210> 35

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<221> modified_base

<222> (4)

<223> 5-Methyl Cytosine

<400> 35

gggncggcg

9

<210> 36

<211> 9

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 36

gggccggcg

9

<210> 37
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (3)
<223> 5-Methyl Cytosine

<400> 37
ggngcggcg

9

<210> 38
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 38
ggcgcggcg

9

<210> 39
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 39
Met Ala Glu Glu Lys Pro
1 5

<210> 40
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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finger peptide

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<223> Any amino acid and this range may encompass 2-4 residues

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<221> MOD_RES

<222> (-6)..(-4)

<223> Any amino acid and this range may encompass 2-3 residues

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<223> Any amino acid

<220>

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<222> (5)..(6)

<223> Any amino acid

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<222> (8)..(10)

<223> Any amino acid

<400> 40

Xaa Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa
 -10 -5 -1 1

Xaa Leu Xaa Xaa His Xaa Xaa Xaa His
 5 10

<210> 41

<211> 4

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 41

Thr Gly Glu Lys
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<210> 42

<211> 5

<212> PRT

<213> Artificial Sequence

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<220>

<221> misc_feature

<222> (5)

<223> Pro may or may not be present

<400> 42

Thr Gly Glu Lys Pro
1 5

<210> 43
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 43
gcggcgggcg

9

<210> 44
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
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oligonucleotide

<400> 44
gcggtggcg

9

<210> 45
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 45
gcgtgggcg

9

<210> 46
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
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<222> (4)
<223> 5-Methyl Cytosine

<400> 46
gggncggcg

9

<210> 47
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 47
gggccggcg

9

<210> 48
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
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<222> (3)
<223> 5-Methyl Cytosine

<400> 48
ggngcggcg

9

<210> 49
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 49
ggcgcggcg

9

<210> 50
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
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<222> (3)
<223> 5-Methyl Cytosine

<400> 50
ggncggcg

9

<210> 51
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 51
gggtcggcg

9

<210> 52
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 52
ggtgcggcg

9

<210> 53
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (4)
<223> 5-Methyl Cytosine

<400> 53
gggncggcg

9

<210> 54
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 54
gggtcggcg

9

<210> 55
<211> 9
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<221> modified_base

<222> (5)

<223> 5-Methyl Cytosine

<400> 55

gcggnnggcg

9

<210> 56

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 56

gcggccgcg

9

<210> 57

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<221> modified_base

<222> (5)

<223> 5-Methyl Cytosine

<400> 57

gcggnccgcg

9

<210> 58

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<221> modified_base

<222> (5)

<223> 5-Methyl Cytosine

<400> 58

<210> 59
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zinc Finger
peptide

<400> 59
Met Ala Glu Glu Arg Pro Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg
1 5 10 15
Arg Phe Ser Arg Ser Asp Glu Leu Thr Arg His Ile Arg Ile His Thr
20 25 30

<210> 60
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zinc Finger
peptide

<220>
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<223> Any amino acid

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<223> Any amino acid

<220>
<221> MOD_RES
<222> (25)
<223> Arg or Lys

<400> 60
Gly Gln Lys Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Xaa
1 5 10 15
Xaa Xaa Xaa Leu Xaa Xaa His Xaa Xaa Thr His Thr
20 25

<210> 61
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Zinc Finger peptide

<400> 61
 Gly Glu Lys Pro Phe Ala Cys Asp Ile Cys Gly Arg Lys Phe Ala Arg
 1 5 10 15
 Ser Asp Glu Arg Lys Arg His Thr Lys Ile His Leu Arg Gln Lys Asp
 20 25 30

<210> 62
 <211> 10
 <212> PRT
 <213> Artificial Sequence : .

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 62
 Arg Gly Asp Ala Leu Thr Ser His Glu Arg
 1 5 10

<210> 63
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 63
 Arg Val Asp Ala Leu Glu Ala His Arg Arg
 1 5 10

<210> 64
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 64
 Arg Glu Asp Ala Leu Ile Arg His Gly Lys
 1 5 10

<210> 65
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc Finger peptide

<400> 65

Glu Lys Arg His His Lys Arg
1 5

<210> 66

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc Finger peptide

<400> 66

Gln Ser Leu Asp
1

<210> 67

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic oligonucleotide

<220>

<221> modified_base

<222> (29)

<223> 5-Methyl Cytosine

<400> 67

gacgtgtgga ctgactgtga cacgccggnc cactata

37

<210> 68

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc Finger peptide

<400> 68

Arg Lys Arg Ala Gly Asp Tyr
1 5

<210> 69

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc Finger

peptide

<400> 69

Arg Thr Leu Asp

1

<210> 70

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>

<221> modified_base

<222> (29)

<223> 5-Methyl Cytosine

<400> 70

gacgtgtgga ctgactgtga cacgccgrnc cactata

37

<210> 71

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc Finger
peptide

<400> 71

Arg Lys Arg Asp Arg Asn His

1

5

<210> 72

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zinc Finger
peptide

<400> 72

Gly Thr Leu Asp

1

<210> 73

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (29)
<223> 5-Methyl Cytosine

<400> 73
gacgtgtgga ctgactgtga cacgccgrnc cactata

37

<210> 74
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zinc Finger
peptide

<400> 74
Lys Thr Arg Thr Ser Asn Thr
1 5

<210> 75
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zinc Finger
peptide

<400> 75
Ala Ser Leu His
1

<210> 76
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<220>
<221> modified_base
<222> (28)
<223> 5-Methyl Cytosine

<400> 76
gacgtgtgga ctgactgtga cacgccgnrc cactata

37

<210> 77
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zinc Finger
peptide

<400> 77
Thr Lys Arg His Asp Asn Arg
1 5

<210> 78
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zinc Finger
peptide

<400> 78
Thr Ser Leu Asp
1

<210> 79
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthteic
oligonucleotide

<220>
<221> modified_base
<222> (29)
<223> 5-Methyl Cytosine

<400> 79
gacgtgtgga ctgactgtga cacgccganc cactata

37

<210> 80
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 80
tatagtggcg cggcgtgtca cagtcagggtg ggccggcgtg tcacagtcag tccacacgtc 60

<210> 81
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic zinc
finger peptide

<223> Any amino acid and this range may encompass 0-2 residues

<220>

<221> MOD_RES

<222> (4)..(8)

<223> Any amino acid and this range may encompass 1-5 residues

<220>

<221> MOD_RES

<222> (10)..(23)

<223> Any amino acid and this range may encompass 9-14 residues

<220>

<221> MOD_RES

<222> (25)..(30)

<223> Any amino acid and this range may encompass 3-6 residues

<220>

<221> MOD_RES

<222> (31)

<223> Xaa is Histidine or Cysteine

<400> 81

Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30